CALIFORNIA
Water Boards

MATTHEW RODRIQUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

Central Valley Regional Water Quality Control Board

28 June 2016

Mark Varljen
Environmental Management
Aerojet-General Corporation
11260 Pyrites Way, Suite 125
Rancho Cordova, CA 95670

QUALITY ASSURANCE PROJECT PLAN, 2016 UPDATE, AEROJET SUPERFUND SITE, RANCHO CORDOVA, CALIFORNIA

Thank you for the submittal of the subject Quality Assurance Project Plan (QAPP). Central Valley Regional Water Board staff reviewed the QAPP and our comments are as follows:

1. Page 6, Section 1.3, OU-2 and OU-4. For or OU-2 change "OU-6" to OU-5" and for OU-4 change "Spoil" to "Soil."

2. Page 6, Section 1.3, second paragraph. The first sentence discusses 317 potential Aerojet source areas identified by the PCD and that 38 of the source areas are addressed by OUs 2 through 5. The next paragraph discusses the remaining 293 source areas. 317 less 38 comes to 275 remaining source areas.

3. Page 8, Section 1.3, first bullet. The QAPP should be reviewed if updates to the permit are made to make sure that QAPP is still sufficient.

4. Page 15, Section 2.3.3, third paragraph. The limit of detection must be below the level of quantitation by definition. Should it not be stated that if the detection limit or quantitation limit now being reported by the laboratory is below previous respective values, that the laboratory would need to justify the improvement(s)?

5. Page 26, Section 4.3.2, second to last sentence. The dedicated submersible pumps are being place in more wells than just those in low or non-detect levels of contaminants. The purpose is to prevent carryover of contaminants from one sample to another.

6. Page 40, Section 7.4.2. Aerojet needs to develop a process to allow submittal of the groundwater monitor data into GeoTracker.

7. Page 46, Section 8.2.2, last sentence. Cannot water and soil vapor samples be considered homogeneous and therefore running the sample twice, once on each of the instruments can be done to check on instrument variability?

8. Page 54, Section 10.1.3, first bullets. The groundwater extraction system for the White Rock North Dump is also being used to control the plume of contaminants associated with the Superfund Site and should be included on the list.

9. Page 62, Section 10.2.4, second paragraph. Calibration is acceptable if the ME values are between "10 feet and 10 feet?"

10. Table 5-1. The IOU 10 (AREA 40) Screening Levels should be at least as stringent as those for the Site-wide screening levels. The State will consider USEPA RSL for tap water in developing screening levels for OU 10. In addition, it is not clear what all was considered for coming up with the OU 10 screening levels. It is not apparent that PHGs were always used when available.

    a. Perchlorate- The Public health goal is 1 µg/L.
    b. Fluoride. Public Health Goal is 1 mg/L.
    c. NDMA. Public Health Goal is 3 ng/L
    d. Barium. IRIS value is 2.1 mg/L.
    e. Methyl mercury. 0.07 µg/L for IRIS value.
    f. Cadmium. Public Health Goal is 0.04 µg/L.
    g. Copper. Public Health Goal is 0.3 mg/L.
    h. Nickel. Public Health Goal is 0.012 mg/L.
    i. Selenium. Public Health Goal is 0.03 mg/L.
    j. Thallium. Public Health Goal is 0.0001 mg/L.
    k. Hexavalent Chromium. Public Health Goal 0.02 µg/L.
    l. Mercury. Public Health Goal is 0.0012 mg/L.
    m. Diesel Range Organics. Taste and Odor – 100 µg/L. 21 µg/L for California Potency Factor.
    n. Aldrin. $1x10^{-6}$ cancer rtisk is 0.021 µg/L.
    o. Heptachlor. Public Health Goal is 0.008 µg/L
    p. Heptachlor Epoxide. Public Health Goa is 0.006 µg/L.
    q. PCBs. Public Health Goal is 0.09 µg/L. (units need to be specified on table).
    r. 1,1,2,2-Tetrachloroethane. Public Health Goal is 0.1 µg/L.
    s. 1,1,2-trichloroethane. Public Health Goal is 0.3 µg/L.
    t. 1,1-DCA. Public Health Goal is 3 µg/L.
    u. 1,2-Dichlorbenzene.. Secondary MCL is 100 µg/L.
    v. 1,2-DCA. Public Health Goal is 0.4 µg/L.
    w. 1,2-Dichloropropane. Public Heath Goal is 0.5 µg/L.
    x. 1,3-Dichlorbenzene. The IRIS value is 7 µg/L.
    y. Benzene. Public Heath Goal is 0.15 µg/L.
    z. Bromodichloromethane. Public Health Goal is 0.4 µg/L

aa. Bromoform. Public Health Goal is 5 µg/L.
bb. Carbon Tetrachloride. Public Health Goal is 0.1 µg/L.
cc. Chloroform. Public Health Goal is 1 µg/L.
dd. Dibromochloromethane. Public Health Goal is 0.7 µg/L.
ee. Ethylbenzene. Secondardy MCL is 20 µg/L.
ff. Methylene Chloride. Public Health Goal is 4 µg/L.
gg. Xylenes. Secondary MCL is 20 µg/L
hh. Tetrachloroethene. Public Health Goal is 0.06 µg/L.
ii. Toluene. Secondary MCL is 40 µg/L.
jj. Trichloroethene. Public Health Goal is 1.7 µg/L.
kk. Vinyl Chloride. Public Health Goal is 0.05 µg/L.
ll. Acenapthene. IRIS is 420 µg/L
mm. Benzoic Acid. IRIS is 28,000 µg/L.
nn. Pentachlorophenol. Public Health Goal is 0.3 µg/L.
oo. Benzo(a)pyrene. MCL is 0.2 µg/L, Public Health Goal is 0.007 µg/L
pp. Benzo(b)fluoranthene. $1x10^{-6}$ excess cancer risk is 0.0078 µg/L.
I may have missed some in my review.

11. Table 5.2b. The protection of groundwater screening levels developed in this table should use groundwater screening levels that take into account PHGs, if they are a lower value than the MCL. Chloroform is one that should be changed.

12. Table 5.5a. We disagree with the background concentration for lead (page 3) as we have pointed out several times in the past. Our position is that the concentrations found in the appendices for the Background Metals Report (2007) for 6020 analyses should be the values selected. This also applies to Table 5.5.b.

If you have any questions regarding this matter, please call me at (916) 464-4626 or contact me by e-mail at amacdonald@waterboards.ca.gov.

ALEXANDER MACDONALD
Senior Engineer

cc: Julie Santiago-Ocasio, United States Environmental Protection Agency, San Francisco
Jim Rohrer, Department of Toxic Substances Control, Sacramento